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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/800,953

03/15/2004

Greg Galazin

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EXAMINER

CULBRETH, ERIC D

ART UNIT

PAPER NUMBER

3616

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,953	<b>Applicant(s)</b> GALAZIN ET AL.	
	<b>Examiner</b> Eric Culbreth	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,10-15,18-20 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5,6,12-15,22-28,30 and 31 is/are allowed.
- 6) ☒ Claim(s) 10,11,18-20 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/15/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Upon reconsideration, the restriction requirement of 11/27/07 is withdrawn in view of the telephone interview of 2/25/08. Following is an action on the merits.

### ***Drawings***

2. The drawings are objected to because of the following informalities. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

- a. Contrary to paragraph [0029], there is no section line VIII-VIII in Figure 5 (note also paragraphs [0039] and [0040]).
- b. There is a section line VI-VI in Figure 5, but Figure 6 is a top view, not a sectional view.
- c. Apparently, in Figure 5, line VII-VII should be VIII-VIII and line VI-VI should be VII-VII.
- d. Reference numeral 28 (paragraph [0045], line 1 and the remainder of the specification) is not on the drawings.
- e. Contrary to paragraph [0048], line 2 reference numeral 34 is in Figure 6, not Figure 4.
- f. In paragraph [0049], line 6 Figure 5 should actually be Figure 6.
- g. In paragraph [0050], line 4 reference numeral 84 should be 74.
- h. Contrary to paragraph [0050], lines 3-5, part 74 does not change in thickness as illustrated in Figure 5 (nor in Figure 6 or any of the other figures).
- i. Reference numeral 50 (paragraph [0051], line 4) is not on the drawings.
- j. Contrary to paragraph [0051], line 7 reference numeral 106 is in Figure 5, not Figure 3.
- k. Contrary to paragraph [0051], lines 7-9 part 106 in Figures 4 and 6 is not as wide as parts 72 and 74.
- l. Contrary to paragraph [0051], lines 7-9 part 106 is not integral with 70 (see Figure 5).

m. Contrary to paragraph [0052], line 3 the view of Figure 7 is not along the section line VII-VII (again, as above, the section lines in Figure 5 are mislabeled).

n. Contrary to paragraph [0055], line 11 part 20 is not a beam (20 in the drawings refers to the top of shock absorber 20 in Figure 2).

o. Reference numerals 184 and 186 each refer to two different parts of the invention (compare Figures 10A and 10B and paragraphs [0056] and [0058]); a reference numeral should only refer to one part of the invention.

p. Reference numeral 180 (paragraph [0058], line 1 and the remainder of the specification) is not on the drawings.

q. In paragraph [0059], line 1, "56" should be "15".

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claim 29 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

4. The disclosure is objected to because of the following informalities..

Appropriate correction is required.

- a. In paragraph [0006], line 2 "bushing" should be "bushings".
- b. In paragraph [0053], line 6, "cast," should be "cast;".
- c. Regarding paragraph [0053], line 8, it is not clear what is meant by the "finite element analysis method" (this term is not familiar; it is recommended applicant cite references showing this term would be understood in the art).
- d. In paragraph [0059], line 2 "surface" should be "surfaces".

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 29-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 is apparently reversed (the portion of the trailing arm adjacent the frame bracket is not thicker than another portion of the trailing arm).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Pierce et al US006508482B2, newly cited.

Pierce et al '482 discloses a suspension system for suspending a vehicle frame 30 above wheels on axle 28 comprising a pair of hangers or frame bracket assemblies 22 each comprising a resiliently bushed pivotable connection at bushings 34 and each of the hangers on opposite sides of the frame. A pair of trailing arms 24 each comprise a first end comprising a mating surface operatively coupled to the first end and second end of axle 28 respectively and a second end comprising an aperture at 32 that

receives bushing 34. Comparing Figures 5 and 9, the mating surface 36 of the first end of each trailing arm comprises a cavity 63 that is completely encapsulated when the trailing arm is coupled to the axle. As functionally recited the cavity reduces a localized stress transferred from the trailing arms to the axle (i.e., the cavity with the weld 73 at its edge reduces stress transferred from the trailing arm to the axle compared to if the rear mounting plate 36 were solid and the entire area was welded to the axle).

The examiner regrets the earlier indication of allowability.

10. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Dilling et al US005366237A (of record).

Dilling et al discloses a suspension system for suspending a vehicle frame 9 above a plurality of ground engaging wheels 5 comprising axle 7 carrying wheels, hangers 11, 55 coupled to opposite sides of the frame, and air springs 69, 69 comprising a flexible boot. Trailing arms 59 in Figures 11 and 13 have a first end connected to an end of the axle and a second end coupled to a hanger or bracket. A top surface of the trailing arm in Figures 11 and 13 have a first portion adjacent part 61 and a second portion adjacent part 27, the second portion adapted to support an air spring, and the second portion extending above the first portion. As functionally recited, this would reduce the amount of contact between the trailing arm and the boot of the air spring when the air spring is deflated.



***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pierce et al '482.

The shape of window or cavity 63 (i.e., circular vs. rectangular) is an obvious matter of design choice, as the specification gives no stated reason or particular purpose for the shape of the cavity and the invention would appear to work just as well with a rectangular hole as with a circular one.

14. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dilling et al '237 in view of Pierce US005203585A (of record).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dilling et al '237 to include the trailing arm made of I-beam cross section (top and bottom flange, middle web) and cast as a single piece in view of Pierce's beam member 46 (column 3, lines 13-19) in order to conventionally form the trailing arm of strong lightweight construction.

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dilling et al '237 in view of Wallace US004858949, newly cited.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dilling et al to include the trailing arm being a single piece as taught by Wallace in Figure 3 in order to conventionally form the arm inexpensively. How the arm is formed (cast) is a process limitation in an article claim and hence is not structurally distinguishing (MPEP 2113).

***Allowable Subject Matter***

16. Claims 1-3, 5-6, 12-15, 22-28 and 30-31 are allowed.

17. Claim 29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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